

Notice of Allowability**Application No.**

10/593,221

Applicant(s)

ALFERT ET AL.

Examiner

KASHIF SIDDIQUI

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/6/2010.
2. ☒ The allowed claim(s) is/are 1-4, 6-17 and 19-25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date ____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/KASHIF SIDDIQUI/
Examiner, Art Unit 2617

/Kent Chang/
Supervisory Patent Examiner, Art Unit 2617

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Christa Hildebrand on 8/12/2010.

The application has been amended as follows:

Claim 5 has been cancelled and claims 1 and 17 have been amended.

1. A method for operating an electronic toll system for traffic routes, by using at least one cellular mobile communication system comprising a plurality of mobile radio cells, a toll terminal of a toll customer in form of a terminal compatible with the mobile communication system, and at least one toll center for conducting the toll transactions between the toll customer and a toll operator, wherein the method comprises the steps of:

registering the toll customer with the toll terminal at the toll center before the start of a trip on road sections subject to toll by transmitting an identification of the toll customer and booking of a toll route transmitting information about a planned route, wherein the information includes at least one start point and one destination,

wherein during registration the following additional contents are
transmitted from the toll terminal of the toll customer to the toll center: vehicle

data for calculating the tolls, a unique identification of the vehicle, optionally intermediate points for identifying alternative routes, planned start time,

capturing and storing in the toll terminal a list of a sufficient number of mobile cells traversed during the trip for later verification of the booked toll route,

transmitting a message from the toll terminal to the toll center at the end of the trip, wherein the message includes the list of the captured and stored mobile cells,

verifying the booked toll route by the toll center based on a comparison between the list of the traversed mobile cells and data about the routing of the toll roads,

billing of the toll to be collected from the toll customer based on the booked toll route and the predetermined tariff data.

17. An electronic toll system for traffic routes, which uses at least one cellular mobile communication system comprising a plurality of mobile radio cells, and which comprises at least one toll terminal of a toll customer in form of a terminal compatible with the mobile communication system and a toll center for conducting toll transactions between a toll customer and a toll operator, wherein the system includes the following components:

a data storage device in the toll center for storing identification data of the toll customer and a booked toll route based on information about a planned route, wherein the information includes at least a start point and a trip destination, and additionally

vehicle data for calculating the tolls, a unique identification of the vehicle, optionally intermediate points for identifying alternative routes, planned start time.

a memory in the toll terminal for storing a list of mobile radio cells, which are traversed during the trip and captured by the toll terminal, and which are sufficient for later verification,

a data processing unit in the toll center for verification of the booked toll route of the toll customer based on a comparison between the list of mobile radio cells and data relating to the routing of roads subject to tolls,

a billing unit for billing the toll to be collected from the toll customer based on the booked route and predetermined tariff data.

2. The following is an examiner's statement of reasons for allowance:

Keller teaches the limitation "A method for operating an electronic toll system for traffic routes, by using at least one cellular mobile communication system comprising a plurality of mobile radio cells, a toll terminal of a toll customer in form of a terminal compatible with the mobile communication system, and at least one toll center for conducting the toll transactions between the toll customer and a toll operator" (Fig. 1, pg. 9 ll. 7-14, where a cellular system with a plurality of cells is disclosed. A mobile apparatus can be a mobile telephone (i.e. toll terminal) that communicates with a central computer (i.e. toll center) for obtaining the travel information for the purposes of billing

(i.e. toll transaction). The user of the telephone would be the toll customer and the billing party would be the toll operator).

Keller teaches the limitation "wherein the method comprises the steps of: registering the toll customer with the toll terminal at the toll center before the start of a trip on road sections subject to toll by transmitting an identification of the toll customer and booking of a toll route transmitting information about a planned route" (pg. 6 ll. 21-25, where prior to travel, the start position and an identification of the mobile apparatus (therefore the customer) is transmitted to the toll center).

Keller does not explicitly teach the limitation "wherein the information includes at least one start point and one destination." Keller teaches including the starting point but is silent with respect to including the destination. However, attention is directed to Link (which teaches, Abstract, col. 1, ll. 5-10, that a planned route includes a specified destination).

Keller teaches the limitation "capturing and storing in the toll terminal a list of a sufficient number of mobile cells traversed during the trip for later verification of the booked toll route" (pg. 7 ll. 18-24 and pp. 13-14 ll. 21-6, pg. 17 ll. 14-20, where the mobile apparatus stores a list of mobile radio cells encountered during the journey, the list containing the Cell IDs or GPS data.).

Keller teaches the limitation "transmitting a message from the toll terminal to the toll center at the end of the trip, wherein the message includes the list of the captured and stored mobile cells" (pg. 8 ll. 16-19, where the mobile apparatus transmits the position data/list to the central computer at the end of the trip).

Keller does not explicitly teach the limitation "verifying the booked toll route by the toll center based on a comparison between the list of the traversed mobile cells and data about the routing of the toll roads." Keller teaches comparing the transmitted list of recorded radio cells with data related to tolled traffic routes. However, attention is directed to Jones (which teaches, 0117, that the VCU (i.e. toll terminal) can compare a planned route with an actual route and note any differences that exceed a limit).

Although Jones teaches the comparison occurring at the VCU, it would have been obvious to one of ordinary skill in the art to perform the same task at the BSCU (i.e. toll center). There are only a finite number of choices: the VCU, the BSCU, or a third party, therefore one of ordinary skill in the art would be able to select from said finite choice without any undue experimentation. Further, for performing the comparison at the BSCU (i.e. toll center) it would be preferable in that this would reduce the computation power needed by the VCU and also since the central computer of Keller already possesses sufficient computing power.

Keller teaches the limitation "billing of the toll to be collected from the toll customer based on the booked toll route and the predetermined tariff data" (pg. 9 II. 3-6, where the central computer transmits the mobile apparatus ID and the start and stop points to a billing system for account clearance).

In light of the above limitations, the prior art fails to teach or suggest:

wherein during registration the following additional contents are
transmitted from the toll terminal of the toll customer to the toll center: vehicle

data for calculating the tolls, a unique identification of the vehicle, optionally
intermediate points for identifying alternative routes, planned start time

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KASHIF SIDDIQUI whose telephone number is (571)270-3188. The examiner can normally be reached on Monday through Thursday 7:30-18:00 (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kent Chang can be reached on (571)272-7667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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